

## Humboldt State University News

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The mission was called “Burrow Nesting Nocturnal Seabird.” After careful, cooperative planning by the US Coast Guard, US Fish and Wildlife Service, the National Park Service, US Geological Survey, and Humboldt State University, this mission – installing a breakthrough video-camera system for public and scientific viewing of the state’s second largest colony of breeding seabirds, found on Castle Rock near

Crescent City, California – was accomplished on February 23.

Castle Rock, a 14-acre island located less than a mile off the coast of Crescent City, is one of the most important seabird nesting sites along California’s 1,100-mile coastline. Species, including tufted puffins, rhinoceros auklets, Cassin’s auklets, Leach’s petrels, fork-tailed petrels, and about 82,000 breeding common murrelets, occupy the island – some of which can be observed using aerial photos and other means. However, burrow-nesting nocturnal species, like the auklets and petrels, are not easily seen and, thus, little is known about the abundance or health of these populations.

Based on 17- and 34-year-old surveys, scientists suspect Castle Rock hosts substantial numbers of these burrowers. But the fragile soil, rich with burrows up to six-feet long, is not stable enough to support human activity without risking damage to the bird colonies underneath.

Dr. Richard Golightly, a wildlife professor at Humboldt State University, and Eric Nelson of the Humboldt Bay National Wildlife Refuge Complex, which includes the Castle Rock National Wildlife Refuge, teamed together and developed a self-sufficient, remote-control video-camera system, allowing the gathering of information regarding the abundance of birds, burrow use, attendance and departure, nesting timelines, and breeding behavior. The two robotic cameras, solar panels, and transmitters, which were purchased with a grant from the US Fish and Wildlife Services Coastal Program at Humboldt Bay, and specially manufactured in Alaska, support the scientific research without disrupting the habitat.

Additionally, Dr. Golightly says the video from the camera will be available to the public “live,” either by high quality TV in the National Park Service’s Crescent City Visitor’s Center, or via the Web at [www.humboldt.edu/~rtg1/research/castle\\_rock.html](http://www.humboldt.edu/~rtg1/research/castle_rock.html).

“We collectively came up with the idea of installing high-tech cameras with the intent of

transmitting real-time video back to us on land,” said Dr. Golightly. “But this project required transportation of equipment to the island by air, and by highly-trained, highly-skilled professionals.”

In November, Nelson and Golightly contacted the local Coast Guard about utilizing an HH-65 helicopter and pilots to land the equipment and team of biologists on the island. After thorough and careful planning, the multi-agency project, nicknamed “Burrow Nesting Nocturnal Seabird,” was in place.

But finding an area to land a helicopter was no easy task, and a wintertime installation was essential, before thousands of seabirds began nesting.

On February 23, pilots and crew from Air Station Humboldt Bay successfully transported the video equipment and a team of five people to Castle Rock. The team then spent nearly six hours setting up and securing the camera system. Final adjustments required the team to later revisit the island, an activity that was challenging because of the poor weather conditions along the northern California coast this March.

As a result of the successful scientific mission, Golightly says, “We can now study productivity, nesting behaviors, incubation, food fed to chicks, and population sizes. Their numbers, or lack thereof, can also tell us a great deal about ocean conditions, food available in the ocean, and marine pollution.”

For further information about this project, contact Dr. Richard Golightly at [rtg1@humboldt.edu](mailto:rtg1@humboldt.edu) or visit [www.humboldt.edu/~rtg1/research/castle\\_rock.html](http://www.humboldt.edu/~rtg1/research/castle_rock.html).

**Attention editors/news directors:** photos to accompany this release can be downloaded from [news.humboldt.edu](http://news.humboldt.edu).

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